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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/257,223	02/25/1999	LESLIE DEREK HUMPHREY	476-1733	1908

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EXAMINER

GEORGE, KEITH M

ART UNIT	PAPER NUMBER
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2663

18

DATE MAILED: 12/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

Office Action Summary

Application No.

09/257,223

Applicant(s)

HUMPHREY, LESLIE DEREK

Examiner

Keith M. George

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Achilleoudis et al., U.S. Patent 6,052,386, hereinafter Achilleoudis in view of Czerwiec et al., U.S. Patent 6,314,102, hereinafter Czerwiec, Lamport, U.S. Patent 5,138,615, hereinafter Lamport and Saussy, U.S. Patent 5,936,963, hereinafter Saussy. Achilleoudis teaches a digital communication service as shown in figure 2 and also teaches the use of mini-cells based on Asynchronous Transfer Mode (ATM) (column 4, lines 35-39). These mini-cells are allocated for housekeeping, ranging, MAC-layer and payload (control and supervision) (column 4, lines 43-46). Achilleoudis also teaches that the amount of mini-cells allocated for housekeeping, ranging, MAC-layer and payload is adapted to the actual need, and can even be zero for some cell types (column 4, lines 43-47). Since the mini-cells can be used for payload, any type of data traffic can be sent over them, including packet voice traffic. Achilleoudis also teaches that the mini-cells are frame and byte oriented as shown in figure 3. Achilleoudis teaches all of the above with the possible exception that the digital service is used in a point to point digital subscriber line communication service, scrambling the data over the line and synchronization that occurs during a period of null data transmission. Czerwiec teaches an ATM system that includes a scrambler before a Reed Solomon encoder and a descrambler after the Reed Solomon decoder (column 18, lines 4-6). Lamport teaches packet flow control for a local area network where if there is no data

Art Unit: 2663

which needs to be sent between two hosts, then synchronization bytes are sent, and the synchronization bytes are simply null data (column 9, lines 65-68). Saussy teaches transferring data over an ADSL link using the ATM data format (column 3, lines 1-3). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the scrambler/descrambler of Czerwiec to the method of Achilleoudis in order to randomize the data (Czerwiec, column 18, lines 4-6). It would have also been obvious to a person of ordinary skill in the art to use the packet flow control method of Lamport to send synchronization bytes as null data since they can instruct the receiver that no data is being sent (Lamport, column 10, lines 31-34). It also would have been obvious to a person of ordinary skill in the art that Achilleoudis is teaching the use of mini-cells in an ATM network and since Saussy is teaching that ATM data can be sent over an ADSL link, which is inherently suited for point to point subscriber lines as explained by the applicant on page 6 of the "Response to Office Action Mailed May 12, 2003", the mini-cells of Achilleoudis can be used in the ADSL/ATM network of Saussy. At the time the invention was made, one of ordinary skill in the art would have been motivated to use the mini-cells in the ADSL network since ADSL may operate over existing telecommunications infrastructure without substantial investment, and is transparent to voice services (Saussy, column 2, lines 25-28).

3. Claims 2-6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Achilleoudis, Czerwiec and Lamport as applied to claim 1 above, and further in view of Deng, U.S. Patent 6,243,394, hereinafter Deng.

4. Referring to claim 2, 3, 6 and 13, Achilleoudis, Czerwiec, Lamport and Saussy teach a point to point digital subscriber line communication system, the use of mini-cells for control and

Art Unit: 2663

supervision, scrambling the data over the line and synchronization that occurs during a period of null data transmission as shown in claim 1 above. Achilleoudis, Czerwiec, Lamport and Saussy teach all of the above with the possible exception of the use of modems to connect the two systems, a multiplexer or packet transaction means. Deng teaches a digital communication system comprising an ADSL Modem, Data Bus/Multiplexer and Switching Port Controllers (packet transaction means) in figures 4 and 5. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize the mini-cells as taught by Achilleoudis, Czerwiec and Lamport over the network taught by Deng. One of ordinary skill in the art would have been motivated to do this in order to facilitate an easy implementation of multiple services over a single communication network (Achilleoudis, column 4, line 48).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Achilleoudis, Czerwiec, Lamport, Saussy and Deng as applied to claim 2 above, and further in view of Deng. As applied to claim 2, Achilleoudis, Czerwiec, Lamport, Saussy and Deng do not teach a connection to an ATM network. Deng teaches a WAN protocol converter in figure 5 that can convert the protocol of data packets received from the wide area network from WAN protocols, such as frame relay or ATM protocol (column 7, lines 57-60). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to connect the network of Achilleoudis, Czerwiec, Lamport, Saussy and Deng to an ATM network to provide WAN connectivity to the devices on the network.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Achilleoudis, Czerwiec, Lamport, Saussy and Deng as applied to claim 4 above, and further in view of Deng. As applied to claim 4, Achilleoudis, Czerwiec, Lamport, Saussy and Deng do not teach a twisted

Art Unit: 2663

conductor pair to connect the two devices. Deng teaches a twisted conductor pair to connect the devices as shown in figures 4 and 5. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to connect the two devices in the communication network of Achilleoudis, Czerwiec, Lamport, Saussy and Deng with a twisted conductor pair as taught by Deng since an ADSL modem transmits and receives digital data packets on twisted pair (Deng, column 5, lines 2-3).

Response to Arguments

7. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

8. Applicant argued on page 7 of the "Response to Office Action Mailed May 12, 2003" that Achilleoudis does not teach a point-to-point subscriber line. While it is possible that Achilleoudis does not teach a point-to-point subscriber line, Achilleoudis does clearly teach the use of mini-cells in an ATM network. It has also been clearly shown that Saussy teaches the transfer of ATM data over an ADSL link (point-to-point subscriber line). The combination of these references clearly teaches that mini-cells can be used over an ADSL link as described in reference to claim 1 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith M. George whose telephone number is 703-305-6531. The examiner can normally be reached on M-Th 7:00-4:30, every other F 7:00-3:30.


Art Unit: 2663

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.



Keith M. George
2 December 2003



CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 12/4/03